Board by acting in an advisory capacity on all matters concerned with the health of children.

The report is well balanced and maintains a proper sense of proportion and values; as evidence of this it should be noted, especially by those who are critical of any encroachments by the State upon the liberty and obligations of individuals, that the following sentence appears on page 1: "Primary responsibility for the health of their children must continue to rest with parents, and they should regard members of the health services as agents helping them to carry out their duties and not as authorities taking the responsibilities off their shoulders."

DOCTORS ON TRIAL

Twenty-three German doctors are now being tried in Nüremberg for crimes committed during the war. A photograph of the accused men appears above the first article by Dr. Kenneth Mellanby on this subject at page 148 of this week's *Journal*. Dr. Mellanby has been to Germany to collect first-hand information on this matter, which is of profound significance in the history of medicine. It is a commonplace to say that medicine knows no frontiers, but behind this statement lies the recognition that medicine as it is practised in the civilized world is a product of Western civilization and therefore inspired by Christian ethics and Greek thought. The code of the civilized doctor is the Hippocratic oath. When, therefore, any group of medical men in a country claiming to be civilized offends against the spirit and tradition of Western medicine the offence becomes the concern of all doctors who follow the same tradition and try to live up to the same spirit. To ignore the infamy of those German doctors who have betrayed their trust and their profession would in part be to condone it. For this reason alone, therefore, we consider that the facts being disclosed at Nüremberg should go on record in the pages of a medical journal.

It was, we believe, Goering who said that Hitler was the keeper of his conscience. A glance at the diagrams in Dr. Mellanby's article showing how medicine was controlled in Nazi Germany suggests how it was possible for some medical men to make the same easy and fatal surrender—the surrender, in fact, of the individual conscience to the mass mind of the totalitarian State. It is probably impossible for the British doctor to understand the mentality of the German doctors accused of brutal experimentation on fellow human beings, because he has not been submitted to a systematic degradation of human values over a period of 10 or more years. The question whether valuable information secured by such experiments should be used for the benefit of others has been discussed in the correspondence columns of our contemporary, the *Lancet*, in letters which show how difficult it is to look at such a problem in a dispassionate and objective manner. Dr. S. M. Hilton[1] points out that "valuable information has already been obtained by observation of victims systematically starved by their Nazi oppressors; yet no objection has been raised on moral, ethical, or political grounds." Mr. Denis Herbert[2] writes: "If their results are capable of being put to useful purposes and we destroy them we are ensuring that they have produced nothing but evil. If we publish and use them then at least some good will have followed." The situation might be summed up by posing this question: If in their experiments German doctors had discovered a cure for cancer would the rest of the world say that this information must be destroyed because of the manner in which it was obtained? To say that such information should be used would surely not be interpreted as condoning the method or as encouraging others to pursue similar methods.

[1] *Lancet*, 1947, 1, 43
[2] Ibid., 1947, 1, 84.

HYGIENE IN THE KITCHEN

Communal feeding for all grades of society has probably come to stay in our country as it has in America. Food rationing, shortage of domestic help, and difficulties in travel have led to an increasing proportion of "meals out," while works and school canteens have multiplied a thousandfold during recent years. This communal feeding must increase the risks of food-borne infection unless the highest hygienic standards are maintained in the kitchen, and the steady rise in the number of reported outbreaks of food poisoning during the war years,[1] from 47 in 1940 to 550 in 1944, reflects in some measure the present dangers from the communal meal. While a fair number of these outbreaks have been due to contamination of food with intestinal pathogens of the Salmonella and dysentery groups a large proportion have been, clinically and epidemiologically, examples of toxic food poisoning such as is caused by the enterotoxic staphylococcus, but may also be due to other less well differentiated bacteria. Indeed there is bacteriological evidence that any gross bacterial contamination of food may result in an outbreak of gastro-enteritis.

The main sources of bacterial contamination are the hands of the kitchen staff and the utensils used for handling and holding food. Food that has been cooked and improperly stored overnight—and cold storage is often lacking or inadequate—is a particular danger, since such food acts as a culture medium for bacteria from hands or utensils. The danger from the latter source is well exemplified by the bacteriological examinations of crockery and cutlery in a variety of restaurants recorded in our present issue by Dr. Irene Hutchinson. Of a large selection of spoons, cups, forks, plates, and glasses, swabbed after they had been washed and stacked, she recovered *Staph. aureus* from 3–12%, haemolytic streptococci from 1–4%, and coliform organisms from 20–40% of the utensils, while *Str. faecalis* and *Str. viridans*, indicators of faecal and salivary contamination respectively, were present in a high proportion of the examinations. The Sonne dysentery bacillus was once isolated from a spoon. No mention is made about bacteriological examinations of larger cooking utensils or containers, but the fact that 50% of 38 dish-washing waters that were examined gave counts of one million or more bacteria per ml. growing at 37° C. suggests that kitchenware generally would be heavily contaminated. The consequent risk to improperly stored food is obvious. Whether crockery and cutlery carrying respiratory pathogens such as *Staph. aureus* and haemolytic streptococci are likely vehicles for the spread of infection by these organisms would be difficult to prove; perhaps the risk is greater with certain respiratory viruses which can infect in very small dosage. But the thought that the crockery and cutlery served with a meal may still harbour the bacterial flora of a previous user must be repugnant to all, and for both hygienic and aesthetic reasons measures are urgently needed to improve kitchen hygiene.

The greatest need is for education of the food handler. Much progress has been made along this line in America, where health authorities have found restaurant proprietors and staff very willing to be educated in methods for avoiding or minimizing food contamination. In this country

[1] See the Report of the Chief Medical Officer, Ministry of Health, on *The State of the Public Health During Six Years of War*, p. 42.

courses of instruction on food hygiene for food handlers are about to be begun on a large scale under the auspices of the Central Council for Health Education.[2] The present plan is to give a course of three lecture-demonstrations to key personnel in catering establishments and to follow up this intensive course with simpler instruction to kitchen staff, waitresses, and the like. Too often, however, the menial work of washing up in the kitchen is done by staff of low educability, and here the need is for better conditions and wages to attract more intelligent workers. The educational programme should be supplemented by increased powers of supervision by the Medical Officer of Health and his sanitary inspector, who at present have no right of entry into catering establishments except to inspect the premises where food is prepared and sold and to ensure that washing facilities are available. Indeed, the existence of most factory canteens comes to the knowledge of the Medical Officer of Health only indirectly, for local authorities are not compelled to register them.

Facilities for dish-washing and for cold storage of food, particularly prepared food, need to be greatly improved. If crockery and cutlery are to be properly cleaned and freed of bacterial pollution they must, after removal of food residues, be washed in water at 120–140° F. with a suitable detergent, of which there are now many on the market. They should then be transferred to a separate sink and rinsed, preferably in wire-mesh containers or racks, at a temperature of 170° F. for two minutes. They could then be drained, allowed to dry without wiping, and stored in a covered cupboard. The wash water must of course be changed frequently, and if cloths are used for wiping they should be boiled daily. Mechanical dish-washers with separate washing and rinsing compartments do the job much more efficiently than the human hand and at a considerable saving of labour. Such dish-washers are being made in this country, and no doubt large catering firms who have had experience of them can help manufacturers to improve design and also advise smaller firms about their availability and uses. The kitchen itself should be large, with plenty of cupboards and cold storage, well lighted and ventilated, with walls and floors that can be easily washed, and preferably in full view of the customers, so that everyone may know that the food he eats is being prepared and served under the best hygienic conditions.

GYNAECOMASTIA

Many who served as medical officers in the Armed Forces will have encountered cases of enlarged or painful breasts in males. This relatively mild disability attains a greater importance in Service life, for the sufferer is liable to be exposed to the ridicule of his fellows and to become ashamed of his abnormality; and webbing equipment may rub on the swollen breast causing discomfort or even considerable pain, a point which, it is interesting to recall, was observed as long ago as 1868. A full review of the condition as it was encountered in the United States Army, where the frequency was about 16 per 100,000 men, has recently been published by Karsner,[3] who had access to the records of 284 cases.

By true gynaecomastia is meant a swelling due to hyperplasia of breast tissues occurring in the male, and it has to be distinguished from a mere deposit of fat in the breast region. The hyperplastic mammary tissue can be felt as a firm button or plate-like mass under the nipple. It does not usually adhere either to the nipple or to the deep structures. In the great majority of cases the condition is unilateral, both breasts being involved in only twelve of Karsner's cases. The two sides are affected with about equal frequency. The weight of the abnormal tissues when excised varies from 25 to nearly 400 grammes, the mass consisting of a proliferation of connective tissue together with an increase and often a proliferation of duct tissue. The secretion that sometimes distends the ducts is probably a mucinous substance and not strictly comparable to colostrum. Acini and lobules are not formed. Some inflammation is usual in these tissues, but it is not closely related to the degree of tenderness complained of. No tendency to neoplasia was seen in any of Karsner's series.

The cause of the condition is still a matter for speculation. The majority of the cases are probably primary in the sense that the abnormality originates in the breast tissue itself. The fact that most cases are unilateral does not exclude an endocrine factor (exophthalmos may be unilateral in hyperthyroidism), but in only a small proportion of the cases was there any evidence of endocrine abnormality. Occasionally a testicular neoplasm was present: Karsner found seven such tumours—two embryonal carcinomas, four malignant teratomas, and one choriocarcinoma. In such cases there is a large production of chorionic gonadotrophin, which may well be an aetiological factor, though satisfactory proof is lacking. The rare adrenal cortical tumours may cause gynaecomastia; and it has also been observed after treatment with adrenal cortical extract and with desoxycorticosterone acetate. Oestradiol and stilboestrol may cause it in man. In most cases, however, there is no evidence of disturbed production of any of these hormones, and the gynaecomastia may be attributed to an unusual sensitivity of the breast tissues to hormones circulating in almost normal quantity.

The treatment of the condition is surgical removal of the breast tissue if pain or anxiety is being produced by it. Endocrine therapy has no consistent beneficial influence on the swelling.

PROGNOSIS OF HYPERTENSION

When queues begin to form for the surgical treatment of hypertension the moment is propitious for reviewing the natural history of the disease. The publication of Bechgaard's extensive monograph[1] dealing with a detailed eleven-year follow-up study of more than 1,000 cases of hypertension is therefore timely. The material is well handled and presented and the literature conveniently reviewed (there are 269 references). The cases were taken from the out-patient polyclinic of the Rigshospital in Copenhagen, and of the total number of 1,038 hypertensives as many as 1,002 were successfully traced. By hypertension was meant a blood pressure of not less than 169/90; the average was 190/110 taken after 15 minutes' rest. The majority were cases of essential hypertension, only 1.3% being malignant and not more than 20%, and probably far less, being renal. There were 325 men and 713 women; but the overall ratio at the clinic was 3 : 2 in favour of women. They were mostly of the working classes. Of the malignant group none were due to a unilateral "surgical kidney."

The sex incidence for malignant cases was 3 : 1 in favour of men (cf. Volhard 5 : 1, Ehrstrom 3 : 1, and Page 2 : 1—all cited). The importance of heredity as an aetiological factor was shown by the calculation that the incidence of hypertension among the parents must have been about 75% (cf. Ayman[2] and Hines[3]).

[2] *Health Education Journal*, Jan., 1947, p. 11.
[3] *Amer. J. Path.*, 1946, **22**, 235.

[1] *Acta. med. scand. Suppt.*, 1946, **172**, 269.
[2] *Arch. ntern. Med.*, 1934, **53**, 792.
[3] *Proc. Mayo Clin.*, 1940, **15**, 145.

The mortality rate was twice as high in men as in women for all age groups if cases of renal hypertension were excluded. It was not adversely influenced by obesity—rather the reverse—nor by the height of the blood pressure provided that it was below 200/130 in men and 220/130 in women; but it was doubled if there was evidence of hypertensive heart disease. The death rate for all cases of high blood pressure expressed as a ratio of that of the general population of Denmark was 2.88 : 1 for men and 1.43 : 1 for women; the death rate in renal hypertension expressed in the same way was 18 : 1. Over the 4–11-year period 41% of the men and 22.4% of the women died. The cause of death was cardiac in 45%, cerebral in 16%, and renal in 10%. The group is comparable to those studied by Janeway[4] and Blackford, Bowers, and Baker,[5] and on the whole the conclusions are similar. Statistics taken from hospital in-patients with hypertension are less favourable.

In the follow-up examination 13% of the men and 2% of the women had regained normal blood pressures. Of 78 women who might have been diagnosed as cases of menopausal hypertension at the first examination, none regained normal pressures; nor did the graph of age incidence show the least tendency to a peak at the climacteric. During the period specified 0.2% of those with essential hypertension and 8% of those with chronic pyelonephritis entered the malignant phase.

These various facts suggest that lumbo-dorsal sympathectomy might be reserved with advantage for males with blood pressures of 200/130 or above, and for females with blood pressures of 220/130 or above; but the males should not be expected to do more than half as well as the females. The tendency to deny operation to obese females on technical grounds is supported now on a prognostic basis. Hypertensive heart disease, far from being a contraindication to surgery, would appear to be an added inducement, especially as it may be reversible (Paul White, 1946).

L ORGANISMS IN GENITAL TRACT

Organisms of the pleuropneumonia group, conveniently called L organisms, are comparatively widely distributed, and many of the species are pathogenic for animals, especially cattle and rodents. Their presence in the genital tracts of men and women has been reported by Dienes,[6] Dienes and Smith,[7] Beveridge,[8] Klieneberger-Nobel,[9] and by Salaman.[10] Beveridge, Campbell, and Lind[11] isolated these organisms from 20% of male patients with non-specific urethritis, and complement-fixation tests were positive in over two-thirds of sera tested; they also found them in 17% of women attending a gynaecological clinic and state their belief that non-specific urethritis, which was relatively common in the Australian Forces, was in the majority of cases due to them.

Salaman[12] has carried out an investigation in a British military hospital and cultured L organisms in males from twelve out of thirty-five cases of gonorrhoea, three out of forty-five cases of non-specific urethritis, two out of thirty-four cases of residual non-specific urethritis after gonorrhoea, and from three out of twenty-four cases without signs of genito-urinary disease; and in females from eleven out of eighteen cases of gonorrhoea, thirty-nine out of sixty-three cases of trichomonal vaginitis, eight out of eighteen cases of non-specific cervicitis, twenty out of twenty cases of gonorrhoea and trichomonal vaginitis, six out of eight cases of non-specific cervicitis and trichomonal vaginitis, but from only one out of seventeen clinically normal women. These results are not very conclusive, but what is remarkable is that he was able to detect L organisms by means of penicillin, which inhibited gonococci but not L organisms, in each of eighty strains of gonococci that he examined.

These organisms were found to grow well on 10% chocolate agar in an atmosphere of carbon dioxide; they were demonstrated by cutting out pieces of the medium, placing them face downwards on a slide, and fixing and staining by a special process. They are intermediate between bacteria and viruses and under the microscope appear as a framework of very fine filaments, in the meshes of which are clusters of vesicles, 2–10 microns in diameter, containing tiny granules. Salaman offers four possible explanations: L organisms (1) may be degenerative forms of gonococci, (2) may invariably contaminate strains of gonococci, (3) may live in symbiosis with gonococci, or (4) may be stages in the life cycle of gonococci. The last possibility is very attractive, especially in view of the difficulty of demonstrating gonococci in chronic and complicated gonorrhoea. Nevertheless much more work needs to be done before any definite conclusions can be drawn.

4 *Arch. intern. Med.*, 1913, **12**, 755.
5 *J. Amer. med. Ass.*, 1930, **94**, 328.
6 *Proc. Soc. exp. Biol.*, N.Y., 1940, **44**, 468.
7 Ibid., 1942, **50**, 99.
8 *Med. J. Austral.*, 1943, **2**, 479.
9 *Lancet*, 1945, **2**, 46.
10 *J. Path. Bact.*, 1946, **58**, 31.
11 *Med. J. Austral.*, 1946, **1**, 179.
12 *Brit. J. ven. Dis.* 1946, **22** 47.

EPIDEMIC KERATO-CONJUNCTIVITIS

The concept of epidemic kerato-conjunctivitis has clarified ideas on various obscure conjunctival and corneal lesions. Different aspects of this protean affection have been recognized in the past, as the designations superficial punctate keratitis, macular keratitis, nummular keratitis, keratitis subepithelialis, and many others testify. That trauma is probably a factor is suggested by the name of shipyard keratitis, and the localities of epidemic outbreaks seem to implicate the sea-coast in the chain of causation. Clinically the significant features of the disease are its great infectivity, the involvement of the pre-parotid lymph nodes, the prolonged course, the serous nature of the conjunctival reaction with disproportionately heavy symptoms, the absence of bacteria in the conjunctival secretion, and the variegated corneal lesions. Pathologically there is much to support the work of Sanders, who isolated a filter-passing virus. The condition has proved resistant to treatment.

Epidemics of kerato-conjunctivitis have been noted in recent years in widely scattered parts of the world. Apart from the severe epidemic on the Pacific coast of the United States and subsequently on its Atlantic coast there was an epidemic in 1937 in the Middle East, persisting for several years, and apparently one in Germany in 1940. The German epidemic seems to have been sufficiently severe and protracted for the Swiss authorities to promulgate special measures for the protection of their armed forces in June, 1945—a measure regarded as panicky by Rintelen.[1] Of the epidemic in the Middle East Feigenbaum, Michaelson, and Kornblüth[2] have contributed a valuable study based on material observed in Palestine. Like other observers, they stress the roles of trauma and ill-defined climatic factors; like them, too, they failed to find inclusion bodies in epithelial scrapings. Though they do not go as far as Wright in speaking of keratitis diversiformis, they stress the great variety of corneal reactions, which consist mainly of ill-defined subepithelial dots. There are, however, also definite subepithelial infiltrates, or superficial epithelial infiltrates, and more rarely disciform keratitis.

1 *Ophthalmologica*, 1946, **111**, 108.
2 *Brit. J. Ophthal.*, 1945, **29**, 389.

The conjunctival reaction they observed was also variable and must be regarded as the primary lesion, though corneal involvement existed in well over half the cases; there may be a non-specific congestion, velvety reaction, or follicular hypertrophy simulating trachoma. Histological examination of human conjunctiva showed flattening of the epithelium, marked capillary dilatation, oedema in the subepithelial tissue, and subepithelial infiltrates with lymphocytes and large mononuclear cells. They could confirm the specific infective nature of the disease by rabbit experiment, while by tissue culture and filtration experiments they, like Sanders, found the infective agent was a filterable virus. In contrast to the immunity seen in patients and shown by immune tests none is developed by the rabbit.

A further contribution on epidemic kerato-conjunctivitis, as seen in the Middle East, has been made by O'Donovan and Michaelson[3] on cases in Egypt. Here a striking aspect was an associated skin lesion—mainly seborrhoeic dermatitis involving the scalp and face. To what extent this association is parallel to that found in herpes simplex and zoster they leave an open question.

RELIEF OF ITCHING AND URTICARIA

In 1937 Bovet and Staub[4] detected anti-histamine activity in certain aromatic derivatives of amino-ethyl and ethylenediamine, and since then much progress has been made. The obvious field of application is in allergic conditions in which histamine—or H substance—probably plays an essential part. Efficient anti-histamine substances should relieve allergic manifestations and may lead eventually to a better understanding of allergy. According to Mayer[5] the mechanism of action of these substances is unknown, and the idea generally accepted at present is of a competition with histamine analogous to the displacement of *p*-aminobenzoic acid by the sulphonamides.

Over eighteen months Brack[6] tested upon over a hundred skin cases an anti-histamine substance 2(*n*-phenyl-*n*-benzylaminomethyl) imidazolin, marketed as "antistin." He has found it is possible with suitable dosage to diminish or abolish the irritation in all cases of urticaria, eczema, neurodermatitis, prurigo, lichen ruber planus, psoriasis, nervous pruritus without cutaneous changes, and post-scabietic itching. In urticaria the rash can be relieved or suppressed, but in the other skin conditions mentioned no direct effect on the disease is obtainable, though relief of the itching helps considerably. In some cases, perhaps by breaking a vicious circle, complete cure results, but as a rule, and where the underlying cause is still operating, the duration of the action of "antistin" is essentially temporary. That it acts peripherally on the vasomotor system is shown by the effects of local application in scratch tests with histamine, diethylmorphine, and simple trauma, when suppression of itching and reduction in the weal size always obtain.

"Antistin" can be given orally (0.1 g. tabs.), intramuscularly, or intravenously (0.1 g. in 2 ml.). Success in treatment depends largely on finding the suitable dose. The initial dose should be small, and intravenously 0.1 g. should be given very slowly over five minutes. The only common unpleasant side-effect is transitory faintness or giddiness, which requires a reduction in oral dosage or of speed of injection. Brack points out that the patients themselves often limit the dosage after getting such attacks. Some patients ask if they have been given a strong hypnotic, and this action of "antistin" is attributed to the effect of the relief of itching in an exhausted patient, though a central effect is not yet disproved.

This observation is of special interest in view of the drowsiness which often occurs with "benadryl"[7] (β-dimethylaminoethyl benzhydryl ether hydrochloride), another new anti-histamine substance recently synthesized. Curtis and Owens[8] have tested this drug in eighteen patients suffering from chronic urticaria which was completely controlled, in all but four cases, so long as the patient continued treatment, but it recurred immediately the drug was withdrawn. Doses of 50 mg., given three times a day, produced relief within two hours in most cases, but many complained of a feeling of drowsiness; and in one case there were severe weakness and vertigo, which passed off on stopping the "benadryl." Shaffer, Carrick, and Zackheim[9] have also used the drug in ordinary urticaria, in papular urticaria of children, and in eczema. Their findings in urticaria are similar to those of Curtis and Owens. Only a few cases of strophulus and eczema were treated, but the drug did not appear to be of great value in these conditions. They noted that the maximum response to the drug occurred twenty to sixty minutes after oral administration and lasted for five to eight hours. "Benadryl" controls the pruritus and temporarily clears the eruption in urticaria, and it is suggested that it may be usefully administered in chronic cases while appropriate investigations are being conducted.

SCOTTISH DOCTORS RESIST

The movement for a closed shop for doctors has spread to Scotland. On Jan. 7 the Motherwell Town Council passed this resolution:

> That as from and after Feb. 1, 1947, it shall be a condition of employment or continued employment in the Departments of the Town Council, or any of them, that every employee shall be or shall have become a member of the Trade Union appropriate in his case.

A minority of the Council was opposed to coercion or applying the condition to existing employees who are non-unionists. Baillie Welch moved the above motion on behalf of the Labour Group of the Council and in face of a communication from the Department of Health for Scotland which ended thus, "... while the Secretary of State is anxious that doctors, nurses, and members of similar professions should join a trade union or appropriate professional association he considers that this matter should not be determined by the unilateral action of local authorities." The Scottish Secretary of the B.M.A. immediately drew the attention of the Town Clerk of Motherwell to the opposition of the B.M.A. to the imposing of such condition of employment on members of the medical profession. At the same time he was assured by the Secretary of the Scottish Branch of the Royal College of Nursing of the co-operation of the Scottish nurses in any action they might take. Eight medical men holding part-time appointments with the Motherwell and Wishaw Town Council immediately tendered their resignations, stating in a resolution that they had no intention of joining a trade union or professional association at the dictation of the Town Council. These Scottish doctors also observed that the Town Council had broken their contracts by introducing a new condition of service without giving the necessary three months' notice.

Medical men in England will applaud the prompt action of protest on the part of their Scottish colleagues. It is only by such action that the present epidemic of dictators will be brought to an end.

[3] *Brit. J. Ophthal.*, 1946, **30**, 193.
[4] *C. r. Soc. Biol.*, Paris, 1937, **124**, 547.
[5] *J. Allergy*, 1946, **17**, 153.
[6] *Schweiz. med. Wschr.*, 1946, **76**, 316.
[7] *J. Allergy*, 1946, **17**, 145.
[8] *Arch. Derm. Syph.*, Chicago, 1945, **52**, 239.
[9] Ibid., 1945, **52**, 243.